■ MICRO-OHMMETER

6292

ENGLISH **User Manual**

AEMC® INSTRUMENTS

Statement of Compliance

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments certifies that this instrument has been calibrated using standards and instruments traceable to international standards.

We guarantee that at the time of shipping your instrument has met its published specifications.

An NIST traceable certificate may be requested at the time of purchase, or obtained by returning the instrument to our repair and calibration facility, for a nominal charge.

The recommended calibration interval for this instrument is 12 months and begins on the date of receipt by the customer. For recalibration, please use our calibration services. Refer to our repair and calibration section at **www.aemc.com**.

Serial #: _____

Catalog #: 2129.83

Model #: 6292

Please fill in the appropriate date as indicated:

Date Received: _____

Date Calibration Due: _____

AEMC® INSTRUMENTS

Chauvin Arnoux®, Inc.
d.b.a AEMC® Instruments
www.aemc.com

Thank you for purchasing an AEMC Micro-meter Model 6292.

For best results from your instrument and for your safety, read the enclosed operating instructions carefully and comply with the precautions for use. These products must be only used by qualified and trained users.

	WARNING, risk of DANGER! The operator must refer to these instructions whenever this danger symbol appears.
	CAUTION! Risk of electric shock. The voltage at the parts marked with this symbol may be dangerous.
	Application or withdrawal authorized on conductors carrying dangerous voltages. Type A current sensor as per IEC 61010-2-032.
	Must not be applied to or removed from conductors at dangerous voltages. Type B current sensor as per IEC 61010-2-032.
	Equipment is protected by double insulation.
	Battery
	Important instructions to read and to fully understand.
	Useful information or tip to read.
CE	The CE marking guarantees conformity with European directives and with regulations covering EMC.
	The trash can with a line through it means that in the European Union, the product must undergo selective disposal for the recycling of electric and electronic material, in compliance with Directive WEEE 2002/96/EC.

Definition of Measurement Categories (CAT)

CAT IV Measurement category IV corresponds to measurements taken at the source of low-voltage installations.
Example: power feeders, counters and protection devices.

CAT III Measurement category III corresponds to measurements on building installations.
Example: distribution panel, circuit-breakers, machines or fixed industrial devices.

CAT II Measurement category II corresponds to measurements taken on circuits directly connected to low-voltage installations.
Example: power supply to domestic electrical appliances and portable tools.

⚠ PRECAUTIONS FOR USE ⚠

The protection obtained by the instrument can be compromised if it is used in a way that is not recommended by the manufacturer.

- Do not attempt to perform any tests with this instrument until you have read the user manual.
- Tests are to be carried out on de-energized circuits only! Never connect the unit to a live circuit.
- The micro-ohmmeter must be connected to the earth/ground point, through the ground terminal or the power cord.
- During a circuit breaker measurement its contacts must be closed and connected to an earth/ground point. The end connected to an earth/ground point must be connected to the “C-” terminal.
- Ensure the terminals are free of any voltage in relation to earth/ground point and between each other. Take into account that in a substation you will find, in disconnected points, high potential levels in relation to the earth/ground point. Those potentials are caused by presence of electromagnetic fields and can be minimized following the indications in the paragraph before.
- Make sure that the current connections are well connected, as well as the C clamp, to avoid undesirable heating.
- Be careful when manipulating the current terminals in the instrument. High temperatures may occur in the current connections.
- Never connect or disconnect the cables during a measurement. If a modification must be made, press the STOP button first.
- The micro-ohmmeter should never be used in an explosive environment (this includes poorly ventilated battery rooms and enclosures).
- The instrument, test leads and measuring wires must be free of defects and should be changed if there is any evidence of deterioration (insulation split, burnt, etc.).
- Never exceed the safety values indicated in the specifications.

Table of Contents

1. INTRODUCTION 5

1.1 Receiving Your Shipment 5

1.2 Ordering Information 5

1.2.1 Accessories 5

1.2.2 Replacement Parts 5

2. PRODUCT FEATURES 6

2.1 Description 6

2.2 Features 7

2.3 Applications 7

2.4 Control Features 8

2.5 Current Probe Connector 8

2.6 LCD Display 9

2.7 Keypad and Function Buttons 9

2.8 Rotary Knob 9

3. INSTRUMENT CONFIGURATION 10

4. OPERATION 12

4.1 Getting Started 12

4.2 Use of Test Probes 13

4.3 Main Screen 13

4.4 Changing the Operating Mode 14

4.5 Creating a New Object Name 14

4.6 Adjusting the Test Current 15

4.7 Adjusting the Test Duration 15

4.8 Measurement Filtering and Working Frequency 15

4.9 Running a Test 16

4.9.1 Normal Mode 16

4.9.2 Both Sides Grounded (BSG) Mode 16

4.9.3 Making Current Adjustments 17

4.10 Warning Messages 17

4.10.1 Saving a Test 18

4.11 Cooling System 19

4.12 Language....20
4.13 Memory....20
4.13.1 Storage Capacity....20
4.13.2 Viewing Stored Results....20
4.13.3 Navigating through a Record....21
4.14 Erasing the Memory....22
4.14.1 Erasing the Entire Memory....22
4.14.2 Erasing a Single Test Group (Record)....23
4.14.3 Erasing a Single Measurement....23
4.15 Checking Memory Usage....24
4.16 Memory Compaction Process....24

5. DATAVIEW® SOFTWARE....25
5.1 Installing DataView....25
5.2 Connecting the Instrument to your Computer....29
5.3 Establishing Communication to the Instrument....29
5.4 The Micro-ohmmeter Control Panel....30
5.5 Configuring the Instrument....31
5.6 Downloading Stored Tests....32

6. SPECIFICATIONS....33

7. MAINTENANCE....34
7.1 Warning....34
7.2 Cleaning....34
7.3 Fuse Replacement....34
7.4 Repair and Calibration....35
7.5 Technical and Sales Assistance....35
7.6 Limited Warranty....36
7.7 Warranty Repairs....36

1. INTRODUCTION

1.1 Receiving Your Shipment

Upon receiving your shipment, make sure that the contents are consistent with the packing list. Notify your distributor of any missing items. If the equipment appears to be damaged, file a claim immediately with the carrier and notify your distributor at once, giving a detailed description of any damage. Save the damaged packing container to substantiate your claim.

1.2 Ordering Information

Micro-ohmmeter Model 6292 (200A, DataView® Software)..... **Cat. #2129.83**

Includes set of 20 ft Kelvin test leads w/C clamp, ground lead (green) with clamp, 5 ft USB cable, 110V US power cord, 12A fuse (5x20mm), and a USB stick supplied with a user manual and DataView® software.

1.2.1 Accessories

Current Probe Model MR6292..... **Cat. #2129.86**

Lead – Set of 2, 50 ft Color-coded Kelvin Leads w/C-clamp ..... **Cat. #2129.87**

1.2.2 Replacement Parts

Ground lead (green) w/clamp..... **Cat. #2129.88**

Set of two 20 ft Kelvin test leads w/C clamp..... **Cat. #2129.89**

Fuse 12A, 5x20mm ..... **Cat. #2129.90**

USB cable (5 ft)..... **Cat. #2140.46**

Power Cord..... **Cat. #5000.40**

Order Accessories and Replacement Parts Directly Online

*Check our Storefront at **www.aemc.com** for availability*

2. PRODUCT FEATURES

2.1 Description

The AEMC® high-current Micro-ohmmeter Model 6292 is a portable, microprocessor controlled instrument. It incorporates optimized filters and protection for measurements in electrical substations. The Model 6292 can be used to accurately measure very low contact resistances on high voltage circuit-breakers and switches, busbars, etc., with test currents up to 200A. It employs the 4 terminal-method Kelvin principle to eliminate errors caused by test leads and their contact resistances.

Measurement accuracy is guaranteed through a state-of-the-art signal amplification system, offset-free with high long-term stability. Resistance readings are shown in the alphanumeric display with up to 4½ digit resolution. It allows measurement of resistances up to 1Ω with resolution as low as 0.1μΩ. Test currents may be adjusted by the operator and are displayed on the digital display.

The Model 6292 has an internal memory for storing up to 8000 readings. The USB interface may be connected to a computer to download the stored values. The high current generation system is based on modern technology that allows for a significant decrease in both weight, 24 lbs (11 kg), and size. The case is made of a hard plastic, highly resistant to impact and environmental conditions. Internal, thermal sensors, in all sensitive components, prevent damage to the instrument that could be caused by overheating.

This is a rugged but light-weight instrument, and may be easily carried by one person. It is water-resistant and can be used in inclement weather conditions (IP54 with closed lid) offering an excellent performance for working both in the laboratory and out in the field.

2.2 Features

- Cooling system to improve the number of sequential tests that can be performed
- Programmable and manual test current selection from 5 to 200A
- Accurately measures low contact resistances with test currents up to 200A
- Measures resistances from 0.1μΩ to 1Ω
- Low resolution of 0.1μΩ
- Perform tests normally or with both sides of the switch gear connected to the ground
- Display is available in four languages
- Measures objects with both sides grounded
- Programmable test duration from 5 to 120 seconds
- Direct viewing of stored tests on the display
- Large LCD digital display
- Stores up to 8000 test results
- USB communication interface
- Direct printout using DataView® software and a PC
- Rugged, light-weight and water-resistant case

2.3 Applications

- Test switchgear contact resistance
- Test circuit breaker contact resistance
- Test air frame bonding
- Test rail bonding
- Test pipeline bonding

2.4 Control Features

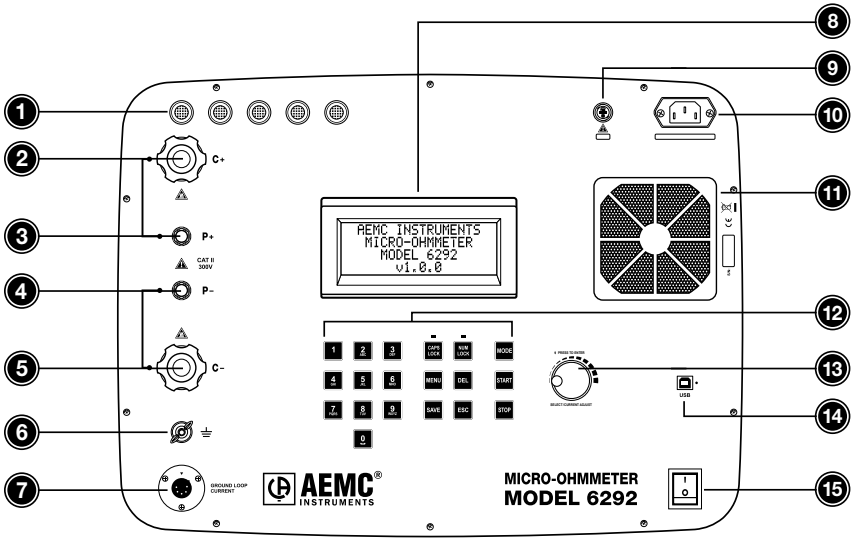


Figure 2-1

1. Intake vents
2. Current output terminal (C+)
3. Potential terminal (P+)
4. Potential terminal (P-)
5. Current output terminal (C-)
6. Ground terminal
7. Current probe connector
8. LCD Display
9. Fuse
10. Power cord connector
11. Fan
12. Alphanumeric keypad and function buttons
13. Rotary test knob
14. USB communication port
15. ON/OFF switch

2.5 Current Probe Connector

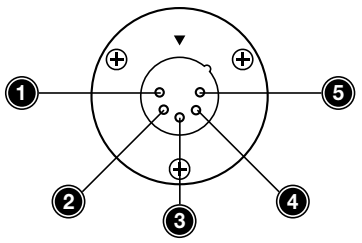


Figure 2-2

1. Positive supply for the current probe (+9VDC)
2. Negative supply for the current probe (Gnd)
3. Not connected
4. Current probe output signal (+)
5. Current probe output signal (-)

NOTE: The positive supply can supply 80mA maximum.

2.6 LCD Display

The 4 line x 20 digit alphanumeric LCD display indicates the measurement result, the corresponding measuring unit, the elapsed time since the measurement started and digital indication of test current, and any messages to the operator. An adjustable backlight is also available.

2.7 Keypad and Function Buttons

The Model 6292 can easily be operated and configured using the alphanumeric keypad. This keypad was designed to make it possible to name groups of tests (records). A “Caps Lock” and “Num Lock” are available for ease of typing.

The Function Buttons perform the following:

- **DEL** erases characters.
- **CAPS LOCK** chooses between uppercase or lowercase letters.
- **NUM LOCK** chooses between numeric or alphanumeric functions from 0 to 9.
- **ESC** aborts some functions or returns back one menu level.
- **SAVE** saves the configuration or advances one menu level.
- **MODE** selects between Normal or BSG operation modes.
- **START** starts a test.
- **STOP** stops a test.

2.8 Rotary Knob

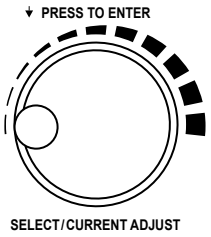


Figure 2-3

The rotary knob is used to adjust the current during a test, navigate through the menus and perform other functions as described below.

- When the main screen is viewed, a quick press will perform the **MENU** button function.
- When in a menu view, a quick press will perform an **ENTER** function.
- When in a menu view, pressing the rotary knob for two seconds performs an **ESC** button function.
- During a fixed current test, a quick press will allow manual adjustment of the test current.

3. INSTRUMENT CONFIGURATION

The Model 6292 can be configured to user defined settings by performing the following:

- Press the **MENU** button to access the main Menu .
- Turn the rotary knob clockwise or counter-clockwise and press the knob to advance to the next level.
- Press and hold the rotary knob to return back one menu level.
- Press the rotary knob or the **SAVE** button for each level's setting to save each configuration.

NOTE: During the navigation in any level of sub-menu lists, pressing the **MENU** button will return directly to the main Menu.

The following parameters are configurable:

MAIN SCREEN:

- Setup Test
  - Edit Object Name
  - Test Current
  - Test Duration
  - Return

LANGUAGE:

- English
- Francais
- Italiano
- Spanish

MEMORY:

- Recall
- Clear All
- Usage
- Return

SETTINGS:

- Date Format
  - MM/DD/YY
  - DD/MM/YY
- Time Format
  - 12H
  - 24H
- Set Date
- Set Time
- Auto Save
  - OFF
  - ON
- Fan
  - AUTO
  - ON
- Display
- Backlight
- Contrast
- Return
- System Info
- Return

NOTE: The instrument can also be configured from the Micro-ohmmeter Control Panel (see §5.5) within DataView®.

4. OPERATION

4.1 Getting Started

WARNING: Read the user manual and safety warnings before using this instrument. Safety procedures and rules for working near high voltage energized systems must be observed during the use of this instrument. The generated voltages and currents may be dangerous.

The Micro-ohmmeter Model 6292 uses the four-terminal Kelvin method to prevent test lead resistance error during measurement. Test current may be chosen by the operator and the reading is obtained by comparison through internal high-stability standards. The measurement result appears in the alpha-numeric display.

1. Connect the instrument to a 120/240V 50/60Hz AC power supply.
2. Before turning the instrument on, connect the test probes to the device to be tested and to the front panel terminals.

Connection Example in BSG Mode:

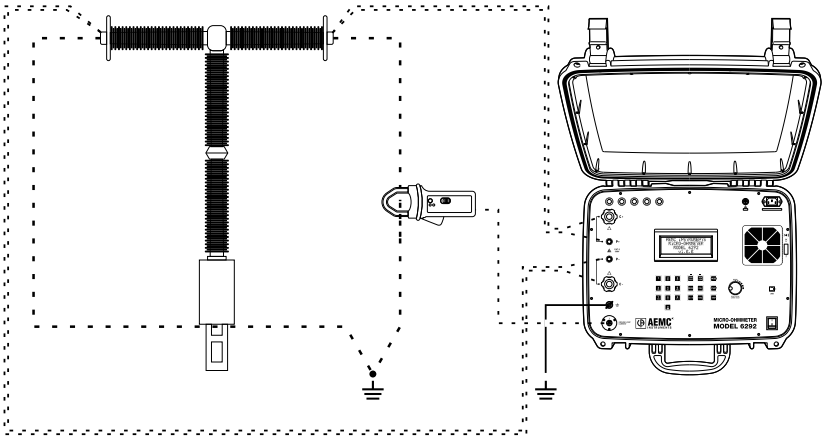


Figure 4-1

WARNING: Do not connect or disconnect the test leads during a measurement.

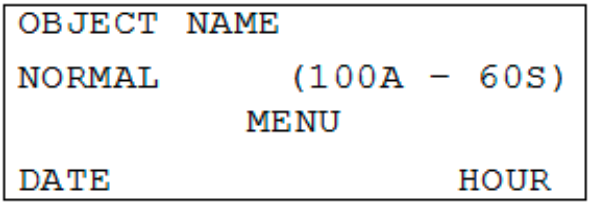
4.2 Use of Test Probes

WARNING: Only use the test leads supplied with the instrument for measurement and calibration procedure.

- Make sure that the current connections are securely connected, as well as the C-clamps, to avoid undesirable heating.
- Pay attention when adjusting the current terminals of the instrument. High temperatures may occur in the current connections.
- Make sure that the leads are not coiled during the measurement to avoid overheating.

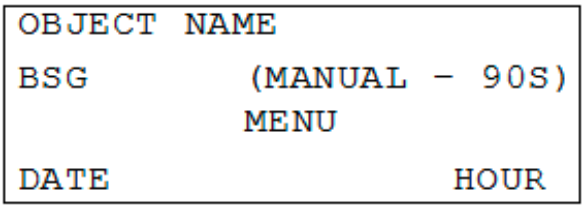
4.3 Main Screen

The main screen displays the present test parameters: Object Name, Test Mode, Test Current, Test Duration, Date and Time.



For the above case, the test will be performed with a current of 100A during 60 seconds in **NORMAL** mode and any saved tests will be stored in “Object Name” group.

In the following case, the equipment is configured to run a manual test with duration of 90 seconds in the **BSG** mode (Both Sides Grounded). See § 4.1 for connection diagram.



4.4 Changing the Operating Mode

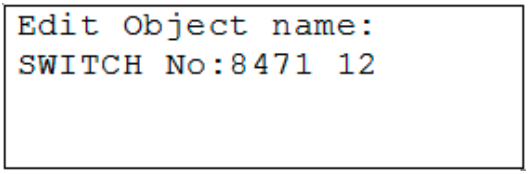
There are two operation modes, **NORMAL** and **BSG** (Both Sides Grounded). The unique difference between both operation modes is the connections to the grounding.

To choose the operation mode press the blue **MODE** button while the instrument is displaying the main screen. Check the main screen to verify that the operational mode indicates the selection.

4.5 Creating a New Object Name

To create a new record name to store the new tests into, go to the main Menu, select *Setup Test*, then select *Edit Object Name*. The present record name will be displayed. To edit, perform the following:

- Press **DEL** to erase characters.
- Press **CAPS LOCK** to choose between uppercase or lowercase letters. Note that for uppercase the LED above the button will be ON.
- Press **NUM LOCK** to input numbers. The LED above the button will be on if the function is selected.
- Press the appropriate number button until the desired letter is displayed. A brief pause of 1.5s will advance the cursor and wait for the next character input.
- Press the **SAVE** button or use the rotary knob to enter the record name into memory.
- Pressing **ESC** will cancel the operation (changes will not be saved).



NOTE: Object names are limited to a maximum of 20 characters.

Every time the user changes the name of the record, the number of tests are set to one. This occurs because, in this case, a new group of tests have been created.

4.6 Adjusting the Test Current

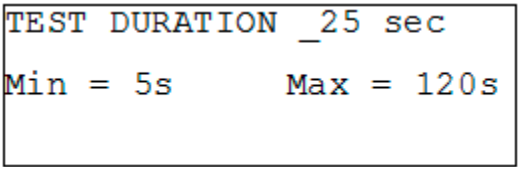
To adjust the test current, go to the main Menu, select *Setup Test,* then select *Test Current*.

A list of available fixed test currents and a “manual” option will be displayed.

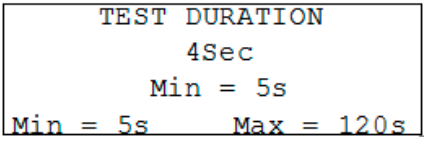
Turn the rotary knob clockwise or counter-clockwise to select the new test current. Confirm the choice by pressing the **SAVE** button or rotary knob. To abort the setup press **ESC**.

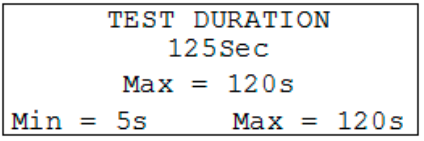
4.7 Adjusting the Test Duration

To adjust the duration of a test, go to the main Menu, select *Setup Test*, then *Test Duration*. A number box will appear containing the current time configuration. Type the desired time using the keyboard or turn the rotary knob to adjust the test time.



The test duration must be between 5 seconds to 120 seconds. If a value outside of this range is selected, a MIN or MAX warning will be displayed, as shown in the example below, and the time should be entered again.





To abort the setup process, press **ESC** or press the rotary knob for 2 seconds.

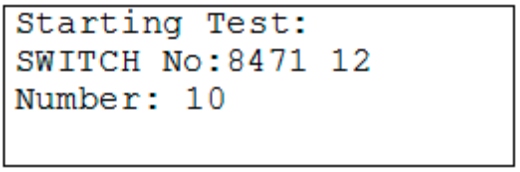
4.8 Measurement Filtering and Working Frequency

The Model 6292 has a strong filter to cancel the 50Hz or 60Hz noise present in a measurement due to the induction generated by high voltage substations. The working frequency is auto detected by equipment and the appropriated filter is selected.

4.9 Running a Test

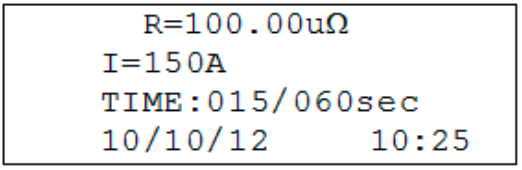
Prior to starting a test, check that the configuration is correct for the desired test and all connections and grounding are good. Pressing the **START** button will start the configured test.

A screen will appear with the name of the record and number of the test:



4.9.1 Normal Mode

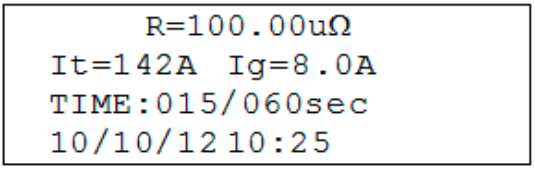
In **NORMAL** mode operation the instrument will display the screen below:



- The first line shows the resistance under test (100μΩ).
- The second line shows the current through the resistance.
- The third line indicates that the elapsed time is 15 seconds and the total time is 60 seconds, so in this case there is still have 45 seconds of test.
- The fourth line shows the present date and hour.

4.9.2 Both Sides Grounded (BSG) Mode

In the **BSG** mode of operation the instrument will display the screen below:



The indications are basically the same as the **NORMAL** mode. The difference is the indication of "Ig" current measured by the current probe.

The second line shows:

- It - the current running through the resistance.
- Ig - the current running through the ground.

4.9.3 Making Current Adjustments

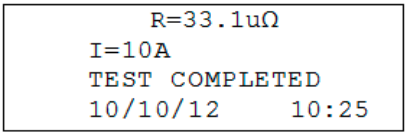
During a test with preselected current, the user can make some current adjustments for study or analysis purposes. Pressing the rotary knob during a test enables the manual mode. Turn the rotary knob clockwise to increase the current or counter-clockwise to decrease to current.

Example: *After the start of a test, if the current is 150A and the user presses the rotary knob, the current can be adjusted to any value between 5A and 200A.*

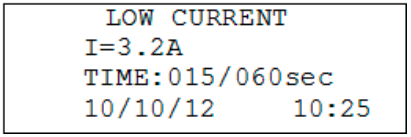
At the end of test, the previous configuration is recovered for the preselected value of current.

4.10 Warning Messages

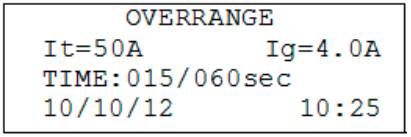
The following warning messages may appear to the user during the test.



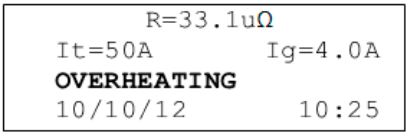
TEST COMPLETED:
Indicates that the test was completed successfully. This message will blink.



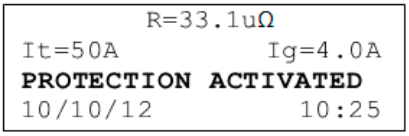
LOW CURRENT:
Indicates that the current is not enough to get the resistance measurement.



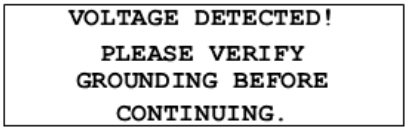
OVERRANGE:
Indicates that the resistance is above the maximum range of equipment.



OVERHEATING:
Indicates that the instrument has reached the maximum temperature limit. This message will blink.



PROTECTION ACTIVATED:
Indicates that the instrument has stopped the test because of some problem. Check the connections to eliminate bad contacts, power supplying and grounding. This message will blink.



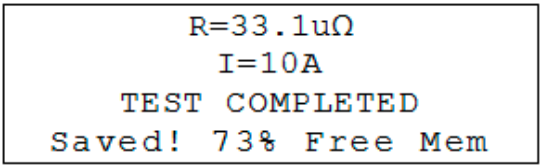
VOLTAGE DETECTED:
Indicates that the instrument has detected voltage above 20V on the current terminals and potential terminals. Check the grounding connections. Tests cannot be performed in this situation.

4.10.1 Saving a Test

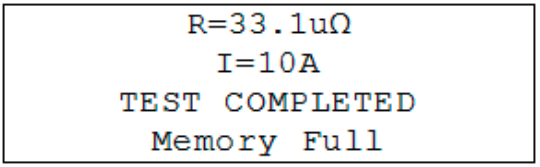
To save a test result, press **SAVE** during the test to get partial results or at the end of the test to save the final result.

If the Auto Save function in the menu settings is set to ON, the final result will be automatically saved at each successfully completed test.

A message appears at the bottom of the LCD when a test is saved:



If the memory is full, a message will be displayed every time a save command is sent:



If the memory is full, the user needs to erase some records or tests in order to allocate enough memory space for the saving of new tests.

When saving a test, the following information is stored in the internal memory:

- Name of the record
- Test number
- Current of test (in BSG mode, both the test current and ground current are displayed)
- Partial, final and total time of test
- Measured resistance
- Date and time

NOTE: A record may contain several tests, and a test may contain several results.

4.11 Cooling System

A cooling system is available in order to increase the number of sequential tests without overheating.

The fan is installed in the front panel of the instrument to exchange hot air inside the instrument with ambient air. A filter is present to avoid undesirable dirt or dust from getting inside the equipment.

If the AUTO option is selected for the fan setting, the fan will turn on only when the internal temperature rises to a pre-defined value. For short tests, the fan will be off.

If the ON option is selected, the fan will constantly run.

4.12 Language

There are four languages available to use: English, French, Italian and Spanish.

To change the language of all screens:

- Go to the main Menu and select *Language*. A list with the available language options will be displayed with the present language marked.
- Turn the rotary knob clockwise or counter-clockwise to select the desired language. Confirm the choice by pressing the **SAVE** button or the rotary knob.

4.13 Memory

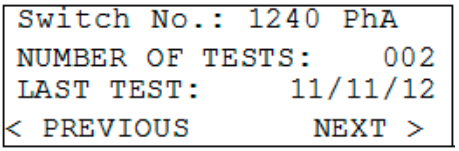
4.13.1 Storage Capacity

The storage capacity for the Model 6292 is 1600 readings to 8192 readings depending on how the tests are stored.

Example: *If a new record is created for each measurement, only 1600 results can be saved. If the name of the record is never changed, it is then possible to save up to 8192 measurements.*

4.13.2 Viewing Stored Results

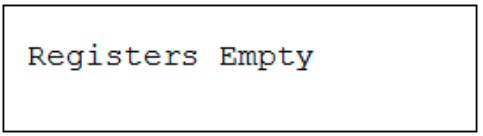
The viewing of a test follows the same structure of saving a test (see § 4.10.1). The first level shown is the record. To see the record, go to *Menu* > *Memory* > *View.*



The most recent record saved will be displayed showing the following information:

- Record name.
- Quantity of tests stored in this record.
- The most recent test performed in this group.
- Indication for the presence of older or earlier records.

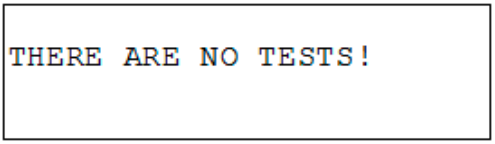
If there are no records saved into memory, the message below will be displayed. Press **ENTER** or **ESC** to proceed.



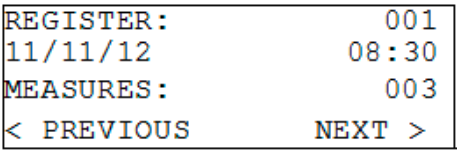
4.13.3 Navigating through a Record

- Turn the rotary knob clockwise or counter-clockwise to navigate by record level.
- Press the rotary knob or the **SAVE** button to advance to the next level which contains each stored test result.

If the memory is empty, the message below will be displayed. Press **ENTER** or **ESC** to proceed.



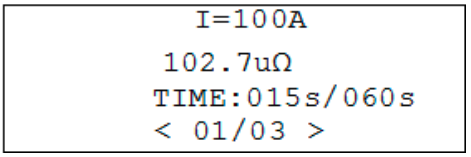
The follow screens will be displayed if at least one test was saved:



- Location of the stored test.
- Date and time that the test was performed.
- Number of stored measurements.
- Indication for the presence of older or earlier tests.

Turn the rotary knob clockwise or counter-clockwise to navigate by test level. A record may have a several tests stored.

Press the rotary knob or the **SAVE** button to advance to the Test Results level, which contains details of saved measurements.



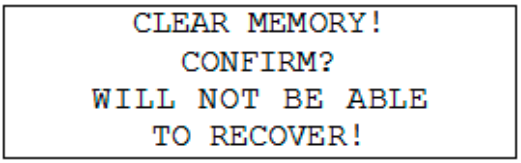
- Test Current at the time of saving.
- Resistance under test.
- Elapsed time at the time of saving.
- Partial/Total of results.

Turn the rotary knob clockwise or counter-clockwise to navigate by measurement result level. A test may have several partial results stored.

4.14 Erasing the Memory

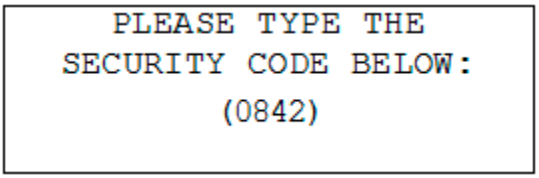
4.14.1 Erasing the Entire Memory

To erase the memory, go to the main Menu, select *Memory*, then select the *Clear All* option. To prevent accidental erasing of the memory, a sequence of confirmations will be requested.



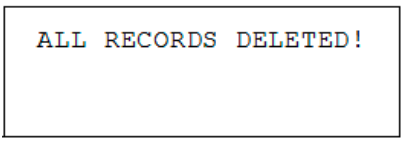
Press the rotary knob to confirm. Press **ESC** at any time during the erasing process to abort the operation.

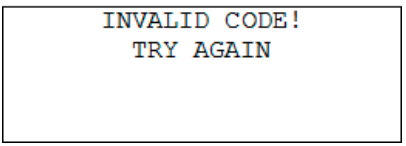
A security code will be requested from the user to confirm the process. Erasing of the memory will start only if the security code is entered correctly. The security code is a random number.



Once the code is entered, press the rotary knob to confirm.

A message will be displayed displaying success or failure:

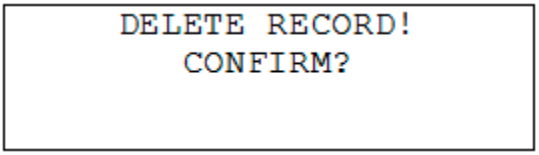




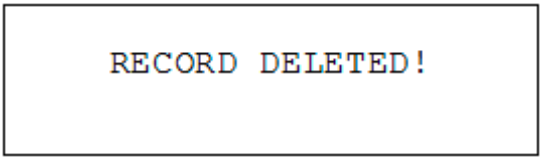
4.14.2 Erasing a Single Test Group (Record)

To erase a single test group, go to the main Menu, select *Memory*, then select *Recall* and select the test group to erase by turning the rotary knob to the desired test group.

Press **DEL** to erase the selected group. A confirmation will be requested:



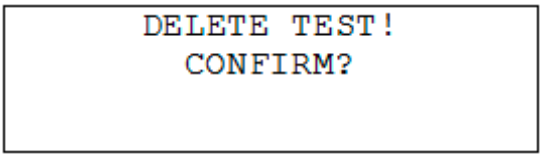
Confirm by pressing the rotary knob or press **ESC** to abort. If confirmed, the following screen will be displayed for four seconds:



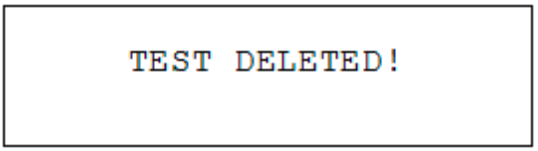
4.14.3 Erasing a Single Measurement

To erase a single measurement within a test group, go to the main Menu, select *Memory*, then select *Recall* and select the measurement within the test group to erase by turning the rotary knob to the desired measurement.

Press **DEL** to erase the measurement. A confirmation will be requested:

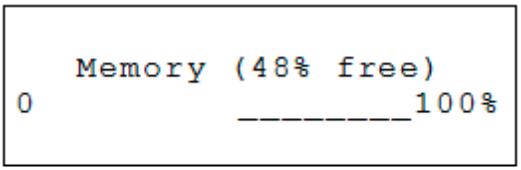


Confirm by pressing the rotary knob or press **ESC** to abort. If confirmed, the following screen will be displayed for four seconds:

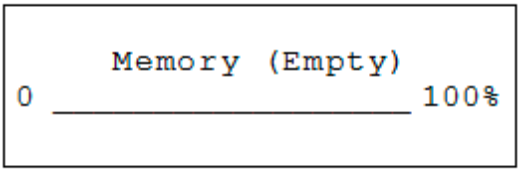


4.15 Checking Memory Usage

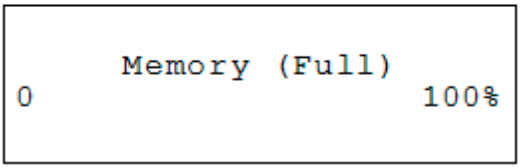
To check how much memory has been used, go to the main Menu, select *Memory*, then select *Usage*. A bar graph will indicate the used memory percentage, as follows:



or



or



4.16 Memory Compaction Process

When the instrument is turned on, it scans all of the memory looking for unused spaces left behind from the erasing process. When unused spaces are found, the compaction process is started and may take several seconds before completed. This scan is made after erasing records or tests from memory.

5. DATAVIEW® SOFTWARE

5.1 Installing DataView

DO NOT CONNECT THE INSTRUMENT TO THE PC BEFORE INSTALLING THE SOFTWARE AND DRIVERS.

Minimum Computer Requirements:

- Windows XP / Windows Vista & Windows 7/8 (32/64 bit)
- 256MB of RAM for Windows XP
  1GB of RAM for Windows Vista & Windows 7/8 (32 bit)
  2GB or RAM for Windows Vista & Windows 7/8 (64 bit)
- 80MB of hard disk space (200MB recommended)
- USB port

DataView® is a registered trademark of Chauvin Arnoux® Inc.
Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.

NOTE: When installing, the user must have Administrative access rights during the installation. The users access rights can be changed after the installation is complete. DataView must be reinstalled for each user in a multi-user system.

USB Flash Drive Install

1. Insert the USB stick into an available USB port (wait for driver to be installed).
2. If Autorun is enabled then an AutoPlay window should appear as shown.

Figure 5-1

NOTE: If Autorun is disabled, it will be necessary to open Windows Explorer, then locate and open the USB stick drive labeled “DataView” to view the files on the drive.

3. In the AutoPlay window, select **Open Folder to view Files**.
4. Double-click on **Setup.exe** from the opened folder view to launch the Data-View setup program.

NOTE: If installing onto a Vista based computer the **User Account Control** dialog box will be displayed. Select the **Allow** option to proceed.

5. A **Set-up** window, similar to the one below, will appear.

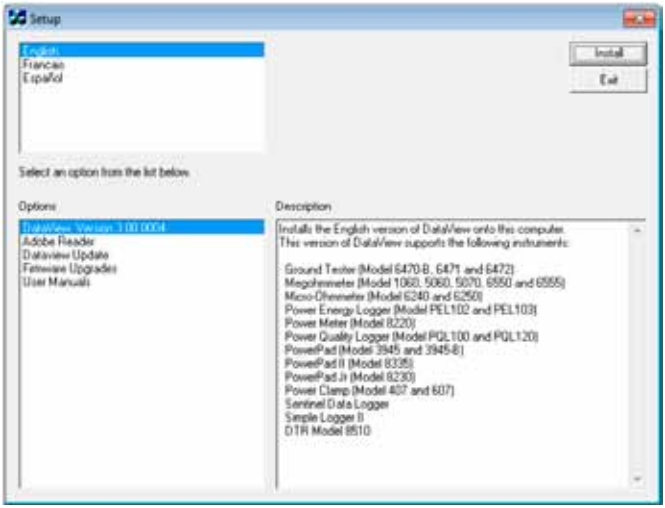


Figure 5-2

There are several different options to choose from. Some options(*) require an internet connection.

- **DataView, Version x.xx.xxxx** - Installs DataView® onto the PC.
- ***Adobe Reader** - Links to the Adobe® website to download the most recent version of Adobe® Reader to the computer. *Adobe® Reader is required for viewing PDF documents supplied with DataView®.*
- ***DataView Updates** - Links to the online DataView® software updates to check for new software version releases.
- ***Firmware Upgrades** - Links to the online firmware updates to check for new firmware version releases.
- **Documents** - Shows a list of instrument related documents that you can view. Adobe® Reader is required for viewing PDF documents supplied with DataView®.

6. **DataView, Version x.xx.xxxx** option should be selected by default. Select the desired language and then click on **Install**.

7. The **Installation Wizard** window will appear. Click **Next**.
8. To proceed, accept the terms of the license agreement and click **Next**.
9. In the **Customer Information** window, enter a Name and Company, then click **Next**.
10. In the **Setup Type** window that appears, select the **"Complete"** radio button option, then click **Next**.
11. In the **Select Features** window that appears, select the instrument's control panel that you want to install, then click **Next**.

NOTE: The **PDF-XChange** option must be selected to be able to generate PDF reports from within DataView®.

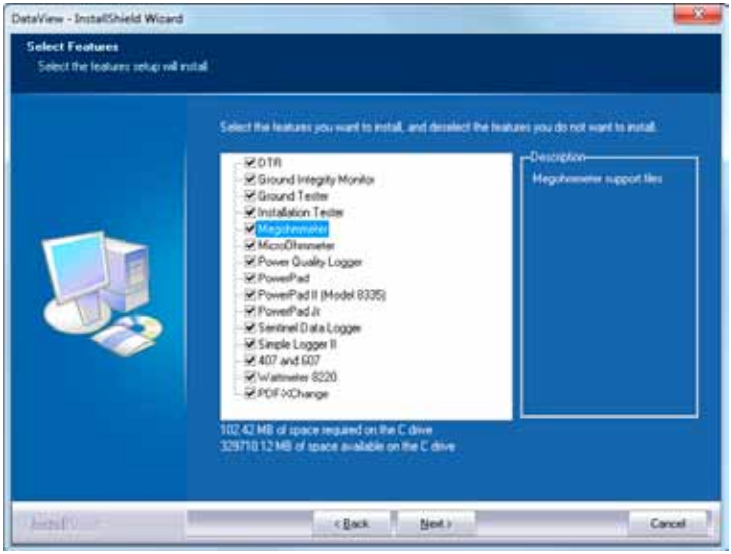


Figure 5-3

12. In the **Ready to Install the Program** window, click on **Install**.
13. If the instrument selected for installation requires the use of a USB port, a warning box will appear, similar to Figure 5-4. Click **OK**.

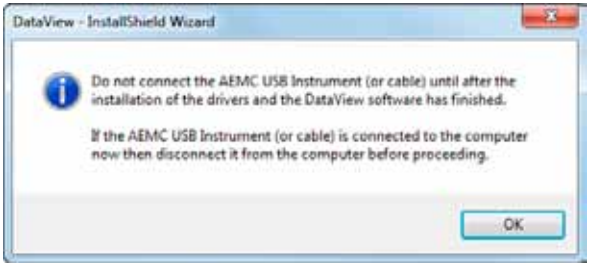

DataView - InstallShield Wizard
Do not connect the AEMC USB Instrument (or cable) until after the installation of the drivers and the DataView software has finished.
If the AEMC USB Instrument (or cable) is connected to the computer now then disconnect it from the computer before proceeding.
OK

Figure 5-4

NOTE: The installation of the drivers may take a few moments. Windows may even indicate that it is not responding, however it is running. Please wait for it to finish.

14. When the drivers are finished installing, the **Installation Successful** dialog box will appear. Click on **OK**.
15. Next, the **Installation Wizard Complete** window will appear. Click on **Finish**.
16. A **Question** dialog box appears next. Click **Yes** to read the procedure for connecting the instrument to the USB port on the computer.

NOTE: The Set-up window remains open. You may now select another option to download (e.g. Adobe® Reader), or close the window.

17. **Restart** your computer, then connect the instrument to the USB port on the computer.
18. Once connected, the **Found New Hardware** dialog box will appear. Windows will complete the driver installation process automatically.

Shortcuts for DataView® and each instrument control panel selected during the installation process have been added to your desktop.

NOTE: If you connected your instrument to the computer before installing the software and drivers, you may need to use the **Add/Remove Hardware** utility to remove the instrument driver before repeating the process.

5.2 Connecting the Instrument to your Computer

The Model 6292 is supplied with a USB cable (Cat. #2140.46) necessary for connecting the instrument to the computer.

To connect the instrument to your computer, connect one end of the USB cable to the communications port (see Figure 2-1, item 14) on the Model 6292 and the other end to an available USB port on the computer.

5.3 Establishing Communication to the Instrument

- Double-click the **Micro-ohmmeter Icon** that was created during software installation, located on the desktop, to open the Micro-ohmmeter Control Panel.
- From the main menu, go to **Instrument > Connect** to open the Connection dialog box.

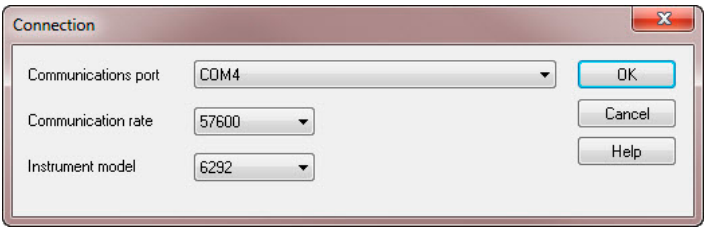


Figure 5-5

- Specify the appropriate Communication port and rate and click **OK**.

NOTE: The connection status can be seen in the lower right-hand corner of the Control Panel and in the Instrument window under status.

5.4 The Micro-ohmmeter Control Panel

The Micro-Ohmmeter Control Panel allows you to configure the instrument and download stored test results. Double-click the **Micro-ohmmeter Icon**, located on the desktop, to open the Control Panel.

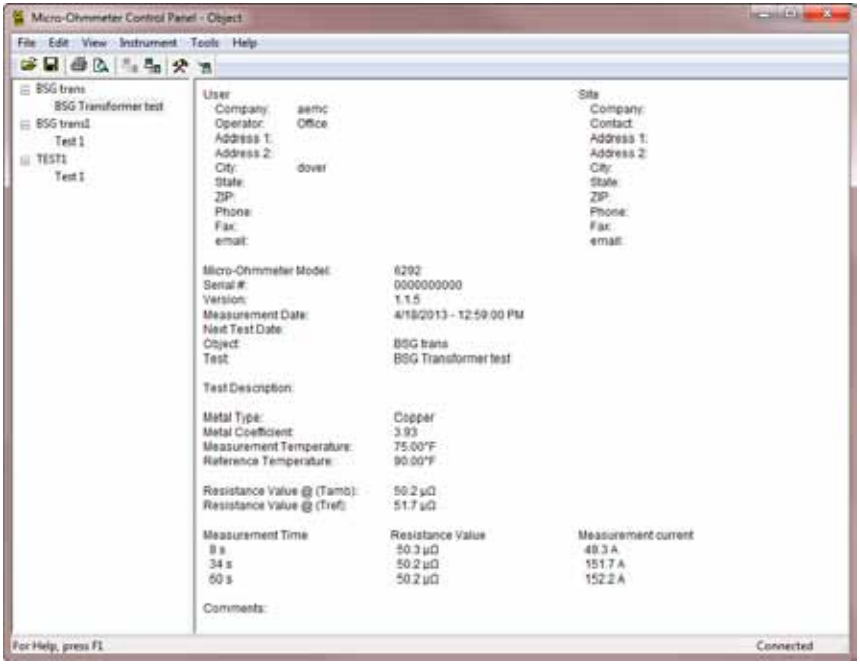


Figure 5-6

The Micro-ohmmeter Control Panel opens and displays the following:

- A shortcut toolbar
- A toolbar with the mode selection and start/stop buttons.
- The instrument's status window (on the left-hand side):
  - Recorded data from the instrument
  - Connection status
  - The model number, serial number, and firmware version
- Configuration window that shows all of the parameters available for modification. This window defaults to the instrument mode that is selected.

If the indicated items are not shown on the screen, select **Restore Default Layout** from the Window menu.

5.5 Configuring the Instrument

To configure the instrument, perform the following steps.

- Establish a connection to the instrument (see § 5.3).
- Go to **Instrument > Configure** from the main menu of the Control Panel. The Configuration Panel dialog box will appear:

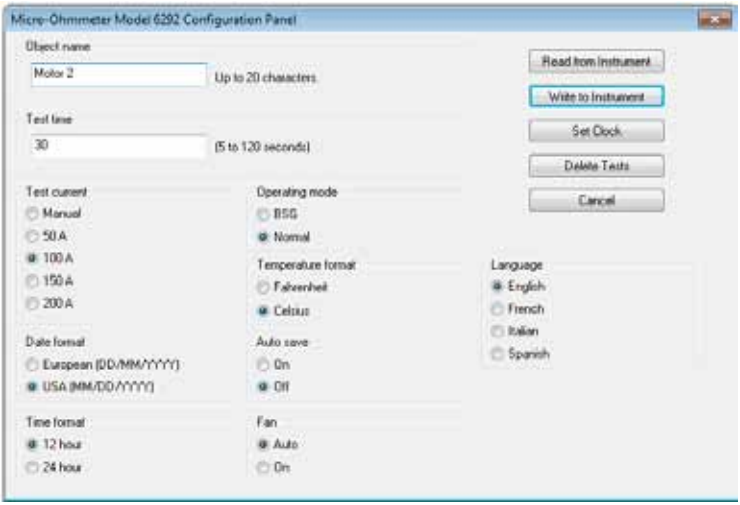


Figure 5-7

This dialog box allows you to configure options for each of the following settings:

- **Object Name:** Name of the object to be tested. When downloading tests with different object names will be stored under the specified object name.
- **Test Duration:** Number of seconds the test will be run.
- **Test Current:** The current to be used when running a test.
- **Date Format:** Specifies the format of dates to be used by the instrument (European or USA).
- **Time Format:** Specifies if the time is to be displayed using a 12 hour (AM/PM) or a 24 hour clock.
- **Operating Mode:** Specifies if tests should be run using BSG or Normal mode.
- **Temperature Format:** Specifies the temperature scale (Centigrade or Fahrenheit) to be used by the instrument.
- **Auto Save:** Specifies if test should automatically be saved when run.
- **Fan:** Specifies if the fan should always be on or only when the temperature exceeds a threshold.
- **Language:** Specifies the language to be used by the instruments display.

Selecting the Write to Instrument button writes the configuration options as they are set in this dialog box to the instrument.

Selecting Read from Instrument resets the options in this dialog box to reflect the setting as they are in the attached instrument.

Selecting Cancel closes this dialog box discarding any changes specified without writing them to the attached instrument.

5.6 Downloading Stored Tests

- To download stored tests, go to **Instrument > Download**. If a connection had not been previously established the Connection dialog box will be displayed (see § 5.3).
- The **Select Tests** dialog box will appear displaying a list of tests stored in the instrument.

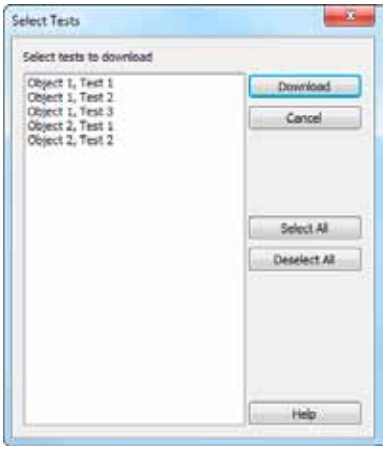


Figure 5-8

- Click on the desired test to download (hold the **Ctrl** key to select multiple tests), then click the **Download** button.
- To edit the name and other properties of the test, double-click on the Test's name on the left side of the Control Panel.

NOTE: For more information on using DataView®, refer to the Help Files within the software.

6. SPECIFICATIONS

Reference Condition: 23°C ± 3°C, RH ≤ 50%

ELECTRICAL	
Test Current Range	5 to 200A (True DC)
Resistance Range	0.1µΩ to 2mΩ 2 to 200mΩ 200mΩ to 1Ω
Accuracy	± 1% of reading from 50µΩ to 1Ω
Resolution 0.1µΩ to 2mΩ 2 to 200mΩ 200mΩ to 1Ω	0.1µΩ (200A max) 10µΩ (25A max at 200mΩ) 1mΩ (5A max at 1Ω)
Output Voltage	100VAC: 4.2V @ 200A 220VAC: 8.6V @ 200A
Max. Load Resistance	100VAC: 20mΩ @ 200A 220VAC: 42mΩ @ 200A
Measurement Method	Four-terminal, Kelvin-type
Test Mode	Normal or both sides grounded (BSG)*
Adjustable Test Time	5 to 120 seconds
Memory	Stores up to 8000 measurements
Interface	USB 2.0
Communication Software	DataView® Software
Power Supply	100 to 240VAC, 50/60Hz
MECHANICAL	
Dimensions	19.8 x 15.5 x 7.5" (502 x 394 x 190mm)
Weight	24.25 lbs (11kg) approx
ENVIRONMENTAL	
Operating Temperature	32° to 122°F (0° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)
Humidity	95% RH (non-condensing)
SAFETY	
Safety Rating	IEC61010-1
Environmental Protection	IP54 with cover closed
Security Protection	Protections against over current, short circuit, overheating and over voltage at output terminals
CE Mark	Yes

**BSG Test Mode requires optional Current Probe Model MR6292 (Cat. #2129.86)*

Specifications are subject to change without notice

7. MAINTENANCE

Use only factory specified replacement parts. AEMC® will not be held responsible for any accident, incident, or malfunction following a repair done other than by its service center or by an approved repair center.

7.1 Warning

- To avoid electrical shock, do not attempt to perform any servicing unless you are qualified to do so.
- Do not perform any service while the micro-ohmmeter is on any circuit.
- To avoid electrical shock and/or damage to the instrument, do not get water or other foreign agents into the electronic module.
- When replacing fuses, install only fuses which are direct replacements.

7.2 Cleaning

- If the case needs cleaning, do not use any alcohol or oil based cleaners. Preferably use soapy water with a damp cloth or sponge.
- Dry immediately after cleaning. Avoid water penetration into the electronic module.
- Make sure the micro-ohmmeter and all leads are dry before further use.

7.3 Fuse Replacement

Make sure that no terminals are connected and that the switch is in the OFF position before replacing the fuse.

To replace the fuse, proceed as follows:

- Set the switch to OFF.
- Disconnect the power cord and measurement leads from the input terminals.
- Replace with an equivalent fuse (12A, 5x20mm)

7.4 Repair and Calibration

To ensure that your instrument meets factory specifications, we recommend that it be scheduled back to our factory Service Center at one-year intervals for recalibration, or as required by other standards or internal procedures.

For instrument repair and calibration:
You must contact our Service Center for a Customer Service Authorization Number (CSA#). This will ensure that when your instrument arrives, it will be tracked and processed promptly. Please write the CSA# on the outside of the shipping container. If the instrument is returned for calibration, we need to know if you want a standard calibration, or a calibration traceable to N.I.S.T. (Includes calibration certificate plus recorded calibration data).

Ship To: Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments
15 Faraday Drive
Dover, NH 03820 USA
Phone: (800) 945-2362 (Ext. 360)
(603) 749-6434 (Ext. 360)
Fax: (603) 742-2346 or (603) 749-6309
E-mail: repair@aemc.com

(Or contact your authorized distributor)

Costs for repair, standard calibration, and calibration traceable to N.I.S.T. are available.

NOTE: You must obtain a CSA# before returning any instrument.

7.5 Technical and Sales Assistance

If you are experiencing any technical problems, or require any assistance with the proper operation or application of your instrument, please call, mail, fax or e-mail our technical support team:

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments
200 Foxborough Boulevard
Foxborough, MA 02035 USA
Phone: (800) 343-1391
(508) 698-2115
Fax: (508) 698-2118
E-mail: techsupport@aemc.com
www.aemc.com

NOTE: Do not ship Instruments to our Foxborough, MA address.

7.6 Limited Warranty

The Micro-ohmmeter Model 6292 is warranted to the owner for a period of one year from the date of original purchase against defects in manufacture. This limited warranty is given by AEMC® Instruments, not by the distributor from whom it was purchased. This warranty is void if the unit has been tampered with, abused or if the defect is related to service not performed by AEMC® Instruments.

Full warranty coverage and product registration is available on our website at **www.aemc.com/warranty.html.**

Please print the online Warranty Coverage Information for your records.

What AEMC® Instruments will do:
If a malfunction occurs within the one-year period, you may return the instrument to us for repair, provided we have your warranty registration information on file or a proof of purchase. AEMC® Instruments will, at its option, repair or replace the faulty material.

REGISTER ONLINE AT: www.aemc.com

7.7 Warranty Repairs

What you must do to return an Instrument for Warranty Repair:

First, request a Customer Service Authorization Number (CSA#) by phone or by fax from our Service Department (see address below), then return the instrument along with the signed CSA Form. Please write the CSA# on the outside of the shipping container. Return the instrument, postage or shipment pre-paid to:

Ship To: Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments
15 Faraday Drive
Dover, NH 03820 USA
Phone: (800) 945-2362 (Ext. 360)
(603) 749-6434 (Ext. 360)
Fax: (603) 742-2346 or (603) 749-6309
E-mail: repair@aemc.com

Caution: To protect yourself against in-transit loss, we recommend you insure your returned material.

NOTE: You must obtain a CSA# before returning any instrument.

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Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments
15 Faraday Drive • Dover, NH 03820 USA • Phone: (603) 749-6434 • Fax: (603) 742-2346
www.aemc.com